

## REMARKS

Claims 1, 3-22, and 25-34 are pending in the application. Claims 1, 3-22, and 25-34 currently stand rejected. Claims 1 and 21 are currently amended. The Applicant respectfully traverses the rejections of claims 1-20 and requests allowance of the claims at the Examiner's earliest convenience.

### *35 U.S.C. § 103(a) Rejection*

Claims 1, 3-12, 15-16, and 18-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,587,831 to O'Brien in view of *Variable Neighborhood Search for Nurse Rostering Problems* by Burke and *Nurse Rostering at the Hospital Authority of Hong Kong* by Chun. The Applicant respectfully traverses the rejections for at least the following reasons.

O'Brien fails to disclose historical shift patterns that comprise a resource dependent shift pattern based on when a resource is working a particular position and a time dependent shift pattern based on when a specific task needs to be performed, as recited by claim 1. Rather, O'Brien merely teaches that workload forecasting is performed using historical data gathered from past events and demands on the call center to determine patterns of high and low work volume (see O'Brien, col. 5, lines 26-37).

In particular, the historical data includes workload records and final staffing assignments for each shift in a schedule period (see O'Brien, col. 5, lines 30-34). Workload records and final staffing assignments do not indicate resource dependent shift patterns based on when a resource is working a particular position. Instead, the workload records simply show past workloads and the staffing assignments show who was working what shift. Moreover, the patterns taught by O'Brien are patterns in workload volume at various times not patterns in resource scheduling (see O'Brien, col. 5, lines 35-37). Therefore, while O'Brien may have staffing assignment to show when a resource was working a particular position, O'Brien does not disclose patterns based on when a resource is working a particular position.

Furthermore, the historical data does not indicate a time dependent shift pattern based on when a specific task needs to be performed. In contrast, O'Brien merely discusses that workloads from various departments within a company can be used to determine pattern of high and low work volumes during different times of the day (see O'Brien, col. 5, lines 30-37).

O'Brien does not discuss shift patterns as they relate to when a *specific task* needs to be performed, but instead focuses on general periods of high and low workload volumes. Thus, O'Brien fails to disclose historical shift patterns that comprise a time dependent shift pattern based on when a specific task needs to be performed, as recited by claim 1.

Additionally, the Office action asserts that O'Brien fails to disclose, but Chun does disclose, historical shift patterns comprise a ratio dependent shift pattern based on when a certain number of a first type of position must be scheduled with a certain number of a second type of position, as recited by claim 1. However, Chun merely teaches ratio dependent constraints when scheduling shifts (see Chun, page 3). These constraints are merely for further schedule production and are not from historical shift patterns, as recited by claim 1.

Chun does not overcome the shortcomings of O'Brien and Chun.

Independent claim 21 contains limitations similar to those of claim 1 and is therefore allowable over the art of record for at least the same reasons as claim 1. The Applicant refrains from a discussion of the remaining dependent claims in view of their dependence from otherwise allowable independent claims.

## CONCLUSION

Based on the above remarks, the Applicant submits that the claims in their present form are allowable over the art of record. Additional reasons in support of patentability exist, but such reasons are omitted in the interests of clarity and brevity. The Applicant respectfully requests allowance of the claims at the Examiner's earliest convenience.

The Applicant believes no fees are due with respect to this filing. However, should the Office determine that fees are necessary, the Office is hereby requested to contact the undersigned to arrange for payment of the applicable fees.

Respectfully submitted,

/Brian L. Arment/

**SIGNATURE OF PRACTITIONER**

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